

REMARKS

This application has been reviewed in light of the Office Action dated August 29, 2003. Claims 1, 3-5, 7, 18-20, 22-24, 26, 71-73 and 95-105 are presented for examination. Claims 6, 8, 25, 27, 44, 45, 52 and 53 have been cancelled, without prejudice or disclaimer of subject matter, and will not be mentioned further. Claims 1, 3-5, 7, 18-20, 22-24, 26, 71-73 and 95-98 have been amended to define more clearly what Applicants regard as their invention. Claims 99-105 have been added to provide Applicants with a more complete scope of protection. Claims 1, 7, 20, and 26 are in independent form. Favorable reconsideration is requested.

Claims 1, 3-5, 7, 18-20, 22-26, 71-73 and 95-98 were rejected under 35 U.S.C. § 103(a) as being unpatentable over either JP 10-58668A, JP 11-25852A, U.S. Patent 6,060,113 (Banno et al.) or EPA 736890 (Kobayashi et al.), in combination with JP 10-5654A or JP 06-163449A.

Independent Claim 1 is directed to a method of manufacturing an electronic device. The method comprises moving a droplet ejecting portion of an ink jet device and a substrate, to which droplets are to be ejected, relative to each other, in a direction along a droplet-receiving surface of the substrate, and detecting a distance between the ejecting portion and the droplet-receiving surface of the substrate. The method also includes ejecting toward a plurality of portions separated mutually on the substrate at plural times, and at a predetermined time interval, the droplets, which are of a liquid containing material

for forming the electronic device. According to Claim 1, the predetermined time interval is controlled based on a result of the detecting.

As has been explained previously, an object of the present invention is to solve the problem posed by variations in the position on a substrate onto which liquid droplets are ejected using an ink jet liquid ejection system (this technique is often used in the manufacture of various types of semiconductor circuitry, and great precision in the placement of the droplets is of high importance). The method of Claim 1 enables the position to be corrected in a manner that avoids the problems of the prior art.

The prior art relied upon in the Office Action has been discussed in detail previously, and it is not believed to be necessary to repeat that discussion in full detail. The Office Action states that the four primary references each fail to disclose measuring the distance between the ejecting portion and the substrate, as recited in Claim 1, and relies upon the two secondary references for that feature.

In the systems of JP10-5654 and JP 06-163499, a distance between a substrate and a nozzle is varied and controlled. However, neither of these documents discloses or suggests that a droplet ejecting portion of an ink jet device and a substrate to which droplets are to be ejected are moved relative to each other, the liquid droplets are ejected toward to the substrate a plurality times at a predetermined time interval, and controlling the time interval based on a result of detecting a distance between the ejecting portion and the substrate, as is done in the method recited in Claim 1.

For at least that reason, Claim 1 is believed to be clearly allowable over the proposed combinations of the prior art (assuming for argument's sake that those combinations would be permissible).

Independent Claims 7, 20, and 26 each recite features that are similar in relevant respects to the recitation of Claim 1 discussed above, and also are believed clearly patentable over those references, for substantially the same reasons as is Claim 1.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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